

Notice of Allowability

Application No.

10/814,419

Examiner

Andrew Wendell

Applicant(s)

NISHIDA ET AL.

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/21/2006.
2. ☐ The allowed claim(s) is/are 3-15, 18-20, 22-33, 38-39, 42-46, and 48-49.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with John O'Banion on 11/30/2006.

The application has been amended as follows:

Regarding Claim 31, on line 1 of the claim, insert -- 22 -- after "claim" and before "further".

Regarding claim 38, on line 1 of the claim, remove "37" and insert -- 33 --.

Regarding claim 39, on line 1 of the claim, remove "37" and insert -- 33 --.

Allowable Subject Matter

2. The following is an examiner's statement of reasons for allowance: The prior art of record, Evans et al. (US Pat Pub# 2005/0277426) in view of Gray et al. (US Pat# 6,674,403); Evans et al. system for locating a mobile unit teaches a first network device 3 (Fig. 1) configured for wirelessly communicating beacon frames (Sections 0037 and 0039) which include signal strength information with at least a second network device 4 (Fig. 1); a motion monitoring module configured for continuously monitoring signal parameters within beacon frames (Section 0037 and 0039) when first network device is moved within a proximity of the second network device and a motion detection module

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configured for comparing the output of the analysis against a threshold to determine whether the first network device and the second network device have moved in or out of proximity with one another within a given time interval (Section 0039-0042).

Gray et al. position detection and location tracking in a wireless network teaches a regression analysis module configured for performing a regression analysis of signal strengths (Col. 4 lines 4-16, Col. 7 lines 44-55, Col. 9 lines 1-26, and Col. 10 lines 14-34).

The prior art of record fails to teach a system for detecting motion of a wireless device comprising a first wireless device configured for communicating wirelessly with at least a second wireless device; at least one of the wireless devices configured as a beacon sender for sending beacon frames containing signal strength information; at least one of the wireless devices configured as a beacon receiver for receiving the beacon frames; a computer processor associated with one of the wireless devices and configured for processing the signal strength information; and programming executable on the computer processor for performing acts comprising calculating, from the signal strength information, differences in signal strength for a plurality of signal strength samples accumulated during a sampling period; performing a regression analysis on the differences in signal strength with respect to the number of samples in the plurality of signal strength samples; calculating, as a result of the regression analysis, a coefficient of determination; calculating, as a result of the regression analysis, a regression coefficient; and generating and outputting a proximity motion detection signal in response to determining that the regression coefficient is approximately equal to or

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greater than the quotient of change in signal strength from start to end of the sampling period divided by the number of the plurality of signal strength samples, and further in response to determining that the coefficient of determination exceeds a threshold value.

The prior art of record fails to teach the claimed subject matter as claimed and substantially connected in claims 3-15.

Regarding claim 18, method claim 18 is allowed for the same reason as system claim 3 since the recited elements would perform the claimed steps.

The prior art of record fails to teach the claimed subject matter as claimed and substantially connected in claims 18-20 and 22-32.

Regarding claim 33, method claim 33 is allowed for the same reason as system claim 3 since the recited elements would perform the claimed steps.

The prior art of record fails to teach the claimed subject matter as claimed and substantially connected in claims 33 and 38-39.

Regarding claim 42, method claim 42 is allowed for the same reason as system claim 3 since the recited elements would perform the claimed steps.

The prior art of record fails to teach the claimed subject matter as claimed and substantially connected in claims 42-46 and 48-49.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hall discloses a method and apparatus for geolocating a wireless communications device. Krumm discloses calibration of a device location measurement system that utilizes wireless signal strengths.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Wendell whose telephone number is 571-272-0557. The examiner can normally be reached on 7:30-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Quochien B. Vuong 12/06/06

QUOCHIE B. VUONG
PRIMARY EXAMINER

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